

WATER QUALITY (WQ) WORKING GROUP
MIT Sea Grant Office -- 9:00 AM to 4:30 PM
24 November 2003

MEETING SUMMARY

ACTION: Next Meeting: January 9th – SEA GRANT , Cambridge

Presentations from Brad Butman (physical oceanography)

Mingshun Jiang (U Mass) (modeling)

Meng Zhou (U Mass) (modeling)

ACTIONS (Data gathering tasks for wg members):

Please send this material to Anne and/or Judy by January 5, 2004. All can be annotated but if given in prose, then it can be incorporated into the text of the report from this group

- **Summary of WQ Regulations (Anne S) -- A good source is the OTA book Wastes in Marine Environment.**
- **Nitrogen Budget information– (Mike / Carlton) -- This should be a one page fact sheet based on near field/farfield data from MWRA.**
- **Oceanography mapping / current flow -- Discussion for next meeting**
- **Cruise ship background papers (EPA Ann R/ Blue water) -- A 1-5 page paper with or including tables would be great – can be annotated**
- **Who is regulating for discharge (Brad / Ann R) -- A short report would be great. May also want to consult with Anne S. to avoid overlap**
- **Shipping jurisdiction for discharge -- Anne S. (with some info from Judy on ballast water)**
- **Mn endocrine disruptors from Jooke Robbins (Jeremy) -- Again a few pages to clarify what we know don't know and why a “monitoring program” is not feasible at this time as this really is still in the research mode.**

ACTION: To the extent possible all should prepare a statement (in a few paragraphs) of what we know (where to go and how to access data)

Available Data

MWRA Monitoring on web

ACOE – MBDS

Natl Coastal Assessment 2000

CCS (2 monitoring sites on the bank) 2000

SBNMS monitoring

Summary provided by

Mike

Judy

Jan

Jeremy

Anne S/ Judy

USGS / WHOI (PO Studies)	Anne S
Harvard LOOPS	Mike
GOMOOS	Ben / Anne S / Mike
Circulation Model MWRA / WHOI / UMASS	Next meeting
SeaWifs	Ben or next meeting
Toxics in fish/sediments	Mass Fisherman's Partnership
(Future meeting (call David Bergeron)	
NMFS Temp Salinity	(Dave Mountain?)
Air Deposition	Jan / Ann R
(CEI / Steve Zeiman)	

***ACTION::* Get names of alternates to Judy and / or Anne S by January 8th.**

***ACTION:* A Working Group Goal Statement needs to be developed. Please send your thoughts to Judy by January 5th.**

***ACTION:* Continue discussion of supporting continuance of GOMOOS in SBNMS and whether another buoy should be placed. We need further information from next meeting.**

***ACTION:* Research profiles of ships entering SB are needed. What MSD's are on board; what are the dumping practices (policy per vessel; volume of discharge; size of vessel (26' – 40'); commercial or recreational; sources of loading and relative importance of each?**

Jack or Tom do you have access to this information? SBNMS staff?

***ACTION:* To further this conversation it was suggested that the group look at the AK self regulation law; ME regulations (fines); Canadian work on discharge; and Florida's MOU.**

Jack Wiggins will you get this information?

***ACTION:* Get cruise line rep and whale watching rep for group. Tom agreed to get this representation.**

***ACTION:* The schedule for WG meetings is as follows:**

Date:	To address:
January 9, 2004	Goal Statement for WG; Why is SB a sanctuary?
	Do we know whether SB water quality is degrading SBNMS?
	Modeling calculations of dumped water ?
	Sewage vessels (EPA) plume tracking report FL? (data on MBDS)
February	TBD

March: TBD

April: TBD

Working Group Attendees

NAME	WG SEAT	Attendance Nov. mtg
Judith Pederson	Chair: SAC	present
Anne Smrcina	Team Lead, SBNMS	present
Douglas Ofiara	Academic	present
Jack Wiggin	Academic	present
Carlton Hunt	Academic	
Frederick Dauphinee	Fishing	
TBD	Fishing	
Jamie Collier	Conservation	present
Tara Nye	Conservation	present
Michael Mickelson	MWRA	present
Ann Rodney	EPA	present
Jan Smith	MA CZM / Mass Bays	present
TBD	Cruise Lines	
Mike Leone	Mass Port	Brad Wellock , alternate present
Tom King	Recreational use	present
Lt. Gabrielle McGrath	US Coast Guard	

Technical Advisors Present: None

Others Present:

Kate Van Dine SBNMS Staff

WELCOME, INTRODUCTIONS, AGENDA, AND COMPENDIUM

Judy Pederson gave an overview of the meeting agenda and reviewed the reference Notebook

SBNMS WORKING GROUP PROCESS

Judy Pederson provided a summary of the Stellwagen Bank National Marine Sanctuary (SBNMS) Sanctuary Advisory Council (SAC) working group (WG) process in relation to the National Marine Sanctuary Program's (NMSP) Management Plan Review (MPR).

She noted that problem statements were based on the public scoping comments that reflect the public's perception of what the problems are, not necessarily the most significant problems.

The initiation of the Management Plan Review (MRP) began in 2002 with 1) a public scoping process, wherein public comments were gathered regarding issues of concern; 2) the comments were categorized by SBNMS staff and presented to the SAC (see Terms of Reference document, "Summary of Scoping Comments"; and, 3) the SAC prioritized the "scoped" issues and suggested the formation of 12 working groups.

The working groups of the SAC review the scoped issues, attending to the question if they are real and/or perceived, provide input concerning additional issues, and then develop an issue-specific Action Plan (AP). The AP will be an in-depth characterization and evaluation of the issues with specific recommendations that address issues and implement strategies. The Water Quality AP is given to the SAC for review and comment; the SAC provides recommendations to the Superintendent. The SBNMS staff prepares the Draft Management Plan (DMP) which is open to a public review process. The public's comments are incorporated, given to the SAC with final comments, and provided to the Superintendent for final review with a resulting Final Management Plan (FMP). This process is scheduled for completion in 2005. Attached is a copy of the power point presentation summarizing the material sent to the working group (WG).

ROLES AND RESPONSIBILITIES OF THE WORKING GROUP

Members were chosen from over 400 nominations representing @ 190 individuals on 12 WGs. Working group members represent constituents, and in that capacity serve as conduits for an information exchange from their constituents to WG discussions.

The *Working Group* is made up of a diverse group of individuals chosen because of their ability to respect diverse points of view, and their knowledge of regional marine resources and management issues. As importantly, it is a discussion between members of the working group and the constituents they represent.

The *Team Lead's* (SBNMS staff) role is to work closely with the Chair to guide an equitable process and to serve as logistical support including providing background material, agenda, minutes, etc. She/he participates in the process as a stakeholder providing advice on the National Marine Sanctuary Program's (NMSP) position, views and policies.

The *Chair*, a member of the SAC, is the meeting administrator and facilitator. The Chair solicits the interests and concerns of the WG, assures that all voices are heard, and guides the fairness of the WG process. If the Chair has an interest that has not been voiced through another member, the Chair must recuse herself from her position as Chair before speaking to her particular interest.

The *Public* is invited to participate as observers. but they must convey their concerns through one of the members of the working group, not directly to the entire group.

Alternates for members can be appointed. Appointment of Alternates is a decision for the WG.

Technical Advisors are individuals with expertise related to the priority issues. Advisors are encouraged to make recommendations and participate in discussions but shall not participate in WG decisions.

DECISION MAKING

The WG will strive to reach decisions as a group by general agreement. If unable to support agreement, a member must demonstrate the importance of that issue and provide written rationale for subsequent recommendation. A definitive record must be kept of all recommendations of the WG.

In the event of significant disagreements, the WG will work in consultation with a facilitator.

GOAL OF THE WORKING GROUP:

A WG Goal Statement needs to be developed. A draft statement will be sent to the group for review and comment to be adopted at the next meeting.

PRESENTATIONS:

Mike Mickelson of the Massachusetts Water Resource Authority (MWRA) presented on MWRA's monitoring program in Massachusetts Bay. He indicated that the process measures effluent at the plant, water column at different depths, sediment, benthos, and fish/shellfish. WQ monitoring measures nutrients and other factors that affect growth of plants.

One of the findings from the Outfall monitoring is a clear measurable ammonium signature suggesting that nitrogen is in a form more readily available to phytoplankton. Both abundance and types of phytoplankton are being monitored as is productivity. Another study, sponsored by the Center for Coastal Studies is examining the ratios of nitrogen to determine if the source is the outfall. Phytoplankton uptake of the outfall nitrogen creates an isotopic signature in dissolved ammonia and in zooplankton over tens of kilometers. These findings are consistent with predictions made by scientists and from a three-dimensional model. The question is they

significant and will they have an impact on Massachusetts and Cape Cod Bays and Stellwagen Bank.

Other data have identified high levels of chlordane (a chlorinated pesticide that has been banned for over 30 years) in caged mussels deployed near the outfall. In addition, higher concentrations of PAH and other organic chemicals and metals are found near the outfall. This fits with expectations and to date is not a cause for concern.

Impacts may not be short term. Identifying changes attributable to the outfall or other anthropogenic sources and natural variability may take years. One of the suggestions from the public was to prepare a contingency plan for Stellwagen Bank National Marine Sanctuary (SBNMS) in the event of a catastrophe. Currently there are additional monitoring locations in SBNMS taken by the group that is conducting the MWRA monitoring program – thus assuring consistency in methodology and data analysis. Results from the 2003 survey will be used to modify the current monitoring design

The future monitoring activities of MWRA may be reduced from their current level if questions posed are adequately answered. This was anticipated several years ago when the plan was being developed. A federally and state appointed Outfall Monitoring Science Advisory Panel provides scientific review of the monitoring results and addresses the issues of whether questions have been ‘answered’. There will likely be a redesign of the monitoring plan to get more specific kinds of information. Mickelson provided a copy of the Overview of the Monitoring Plan and suggested that the committee examine chapter 6 regarding “special studies” not required by permits. These special studies arise from questions that would help inform but are not required.

Doug Ofiara, University of Maine discussed the 1987 Waste in Marine Environment report which identifies listing of impairments identified affecting ecosystem health (Handouts of the meeting available from Anne Smrcina of Table 4.3; Table 6.1)

He discussed efforts to take into account non market values (Exxon Valdez (EV) example) but noted strong disagreement in the conclusions due to differing institutional perspectives. (EV had economist from MIT; AK had another economist from another institution) Papers on this topic will be published in Marine Pollution Bulletin and possibly Nature. He also indicated that federal legislation with resource damage assessment provisions include Oil Pollution Liability Act (OPLA) and Comprehensive Environmental Research and Conservation Liability Act (aka Superfund; CERCLA) wherein assessments are done by teams including economists

Ann Rodney of EPA talked about the recent petition to better control Cruise Ships discharges. She provided the following chronology of the issue.

2000 a GAO report re: cruise ships identified the discharge problem

2000 Blue Water petitioned the U.S. Environmental Protection Agency (EPA) to have vessel discharge as part of the Clean Water Act (CWA) and asked that EPA look at Cruise discharge to be incorporated into National Pollution Discharge Elimination System (NPDES) permits (cruise ships and ballast water are currently exempted).

2003 EPA denied petition

She indicated that following the 2000 EPA white paper several states have taken up the issues (ME; FL; CA; AK). In the Northeast, ME has tackled the issue. She suggests looking at the ME Department of Environmental Protection (DEP) website which includes discussions of designations of zones to manage water quality concerns. Included in this are areas that are no discharge areas.

Brad Wellock of MassPort indicated that MassPort has the ability to hook up to MWRA/ but there is a pass through fee to ship and few ships use the pump out. Given the International Maritime Organization (IMO) required water treatment on ships; the holding capacity and that most ships are not designed to hook up to a shore side facility dumping is the most efficient means to eliminate waste water. There would be an added cost if a ship is required to pump out. The vessel would require adaptation of the vessel as well as a penalty pay for workers performing the pump out. This year the MassPort pump out was used once; in 2002 it was not used; and in 2001 boats diverted from NYC had to rapidly change routes so the facility was used more often.

Brad also described that ships have sophisticated treatment plants. Water is divided into Black water; gray water; ballast water (segregated and not segregated); and bilge water

Ann indicated that the Clean Water Act Marine Safety Device has been on the book for 30 years. Also, the Clean Water Act MSD EPA standards Regulations are 25 yrs old.

International Maritime Organizations standards apply to foreign flag countries

Continuing discussion on this issue included questions such as how to get ships to change behavior; could ship reporting of where discharge occurs be required; how is discharge recorded; Could vessels be categorized differently; what kind of ship are we talking about and how many of them are “state of the art” (cruise ship; whale watch vessels; subchapter T boats;); and how many ships are we talking about?

To further this conversation it was suggested that the group look at the AK self regulation law; ME regulations (fines); Canadian work on discharge; and Florida’s MOU.

A strategy template was distributed to the participants. The committee walked through filling out the form as a way of preparing the action plans. Attached is a copy of the form with information added based on the discussion at the meeting.

The meeting was adjourned at 3:45 by Judith Pederson. Next meeting will be Friday, January 9, 2004.

MATRIX: ISSUES, MEETING DATES AND RECOMMENDATIONS

Issue and Meeting Date	Physical Impacts		Concerns	Research	Recommendations	Regs/Mgt.



U.S. DEPARTMENT OF COMMERCE
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National Marine Sanctuary System
Stellwagen Bank National Marine Sanctuary
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Scituate, MA 02055
(781) 545-8026 FAX: (781) 545-8036

Water Quality Working Group

AGENDA

24 November 2003
10:00 A.M. to 4:00 P.M.
MIT Sea Grant
Cambridge, MA

- 10:00 – 10:30 Welcome, Introductions and Adoption of Agenda
Judith Pederson, MIT Sea Grant, WQ WG Chair
Anne Smrcina, SBNMS, WQ WG Team Lead
- 10:30 – 11:30 Working Group Process (SBNMS)
Ground Rules
- 11:30 – 12:30 WQ Problem Statements: Issues of Concern
Review of Scoping Comments
Review of Prioritized Issues
Discussion
- 12:30 – 1:30 *Working Lunch*
EPA's National Cruise Line Initiative -- Ann Rodney, EPA
- 1:30 – 2:00 MWRA Outfall Monitoring Program -- Mike Mickelson, MWRA
- 2:00 -- 3:30 Issues of Concern: Discussion Continued
- 3:30 – 3:45 W.G. Logistics (Meeting Dates, Technical Advisors)
- 3:45 – 4:00 Next Steps and Summary
- 4:00 Adjourn